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12 UNITED STATES DISTRICT COURT

13 FOR THE NORTHERN DISTRICT OF CALIFORNIA

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15 ILLUMINA, INC. and ) Case No.: 19-cv-03770-WHO  
ILLUMINA CAMBRIDGE LTD., )  
16 Plaintiffs, ) DEFENDANT BGI GENOMICS CO.,  
v. ) LTD.S' ANSWER TO ILLUMINA'S  
BGI GENOMICS CO., LTD., ) FIRST AMENDED COMPLAINT FOR  
BGI AMERICAS CORP, ) PATENT INFRINGEMENT  
MGI TECH CO., LTD., )  
MGI AMERICAS INC., and )  
COMPLETE GENOMICS INC., )  
Defendants. ) DEMAND FOR JURY TRIAL  
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Defendant BGI Genomics Co., Ltd. (“Defendant” or “BGI Genomics”)<sup>1</sup> through its undersigned counsel, hereby demands a jury trial and answers Plaintiffs Illumina, Inc. and Illumina Cambridge Ltd.’s (collectively, “Illumina” or “Plaintiffs”) First Amended Complaint, D.N. 52, (the “First Amended Complaint”) as follows:

## INTRODUCTION

1. Defendant admits that BGI Genomics and MGI Tech are headquartered in Shenzhen, China. Defendant denies any remaining allegations of Paragraph 1 of the First Amended Complaint.

2. Defendant admits that a preliminary injunction was granted in *Illumina, Inc. v. Qiagen, NV*, 207 F. Supp.3d 1081 (N.D. Cal. 2016). Defendant further admits that certain claims of the '537 Patent were not invalidated in *Intelligent Bio-Systems v. Illumina Cambridge*, 821 F.3d 1359 (Fed. Cir. 2016). Defendant denies any remaining allegations of Paragraph 2 of the First Amended Complaint.

3. Defendant admits that CGI filed two Petitions to institute *inter partes* review (“IPR”) of several claims of the ’537 Patent and that neither Petition was instituted. *Complete Genomics, Inc. v. Illumina Cambridge Ltd.*, IPR2017-02172, Paper 20 (PTAB Apr. 20, 2018) and IPR2017-02174, Paper 20 (PTAB Apr. 20, 2018). Defendant admits that CGI listed BGI Shenzhen Co., Ltd.; BGI Groups USA Inc.; BGI Genomics Co., Ltd.; and BGI Americas Corporation as real parties in interest in those Petitions and that MGI Tech and MGI Americas were not identified as real parties in interest. Defendant denies any remaining allegations of Paragraph 3 of the First Amended Complaint.

4. Paragraph 4 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies that BGI Genomics has installed or operated BGISEQ and MGISEQ sequencers, but admits that certain Defendants have installed and, in the past, operated certain BGISEQ and MGISEQ

<sup>1</sup> As used herein, “Defendants” shall refer collectively to BGI Americas Corp. (“BGI Americas”), MGI Tech Co., Ltd. (“MGI Tech”), MGI Americas Inc. (“MGI Americas”), Complete Genomics, Inc. (“CGI”), and BGI Genomics.

sequencers at their San Jose, California facility. Defendant denies any remaining allegations of Paragraph 4 of the First Amended Complaint.

5. Paragraph 5 of the First Amended Complaint contains opinions to which no response is required. To the extent that a response is deemed required, Defendant admits that other Defendants have a presence at the San Jose, California facility of CGI in this District. Defendant denies any remaining allegations of Paragraph 5 of the First Amended Complaint.

6. Paragraph 6 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies the allegations of Paragraph 6 of the First Amended Complaint.

## PARTIES

7. Defendant admits that, on information and belief, Plaintiff Illumina, Inc. is a Delaware corporation with its principal place of business at 5200 Illumina Way, San Diego, California 92122.

8. Defendant admits that, on information and belief, Plaintiff Illumina Cambridge Ltd. is a foreign corporation with its principal place of business at Chesterford Research Park, Little Chesterford, Saffron Walden, Essex CB10 1XL, United Kingdom.

9. Defendant lacks sufficient information to admit or deny the allegations of Paragraph 9 of the First Amended Complaint, and on that basis, denies them.

10. Defendant admits that BGI Genomics is a Chinese corporation that has its headquarters at Building No. 7, BGI Park, No. 21 Hongan 3rd Street, Yantian District, Shenzhen 518083, China. Defendant denies any remaining allegations of Paragraph 10 of the First Amended Complaint.

11. Defendant denies the allegations of Paragraph 11 of the First Amended Complaint.

12. Defendant admits that MGI Tech is a Chinese corporation that has its headquarters at Building No.11, Beishan Industrial Zone, Yantian District, Shenzhen 518083, China.

Defendant denies any remaining allegations of Paragraph 12 of the First Amended Complaint.

13. Defendant admits that MGI Americas has a principal place of business at 2904 Orchard Parkway, San Jose, California 95134. Defendant denies any remaining allegations of Paragraph 13 of the First Amended Complaint.

14. Defendant admits that CGI has a principal place of business at 2904 Orchard Parkway, San Jose, California 95134. Defendant denies any remaining allegations of Paragraph 14 of the First Amended Complaint.

15. Paragraph 15 contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies the allegations of Paragraph 15 of the First Amended Complaint.

## **JURISDICTION AND VENUE**

16. Defendant admits that this action arises under the Patent Laws of the United States of America and that this Court has federal question jurisdiction.

17. Defendant admits that, for the purposes of this action, venue is proper in this District. Defendant further admits that MGI Americas and CGI have a principal place of business at 2904 Orchard Parkway, San Jose, California 95134. Defendant denies any remaining allegations of Paragraph 17 of the First Amended Complaint.

18. Defendant admits that venue is proper in this District for the foreign Defendants. Defendant admits that Judge Alsup of this District had experience with the Plaintiffs' asserted patents, but he has stated that he "now remembers little about the patents." *See* D.N. 18. Defendant denies any remaining allegations of Paragraph 18 of the First Amended Complaint.

19. Paragraph 19 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant admits that, for the purposes of this action, Defendant does not contest personal jurisdiction. Defendant denies any remaining allegations of Paragraph 19 of the First Amended Complaint.

20. Paragraph 20 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies the allegations of Paragraph 20 of the First Amended Complaint.

- 1       a. Defendant admits that Ex. 5 of the First Amended Complaint depicts  
2           “Representative Offices” in San Francisco, Los Angeles, and San Diego,  
3           California and an “Office/Lab” in San Jose, California. Defendant denies any  
4           remaining allegations of Paragraph 20.a. of the First Amended Complaint.
  - 5       b. Paragraph 20.b. of the First Amended Complaint contains legal conclusions to  
6           which no response is required. To the extent that a response is deemed required,  
7           Defendant denies the allegations of Paragraph 20.b. of the First Amended  
8           Complaint.
  - 9       c. Paragraph 20.c. of the First Amended Complaint contains legal conclusions to  
10          which no response is required. To the extent that a response is deemed required,  
11          Defendant admits that BGI Genomics has had a presence at industry trade shows  
12          in California, including those listed in Paragraph 20.c. of the First Amended  
13          Complaint and that BGI Genomics’ CEO, Ye Yin, presented at the J.P. Morgan  
14          Health Care Conference in January of 2018. Defendant denies any remaining  
15          allegations in Paragraph 20.c. of the First Amended Complaint.
  - 16       d. Defendant admits that in March 2019, BGI Genomics entered into a \$50 million  
17          partnership with Natera, Inc. Defendant denies any remaining allegations in  
18          Paragraph 20.d. of the First Amended Complaint.
- 19       21. Paragraph 21 of the First Amended Complaint requires no response.
- 20       a. Defendant admits that Ex. 12 of the First Amended Complaint identifies Yongwei  
21           Zhang as Group VP and CEO of BGI Americas Region at BGI Group. Defendant  
22           denies any remaining allegations in Paragraph 21.a. of the First Amended  
23           Complaint.
  - 24       b. Defendant admits that Ex. 13 of the First Amended Complaint identifies Ke Zhan  
25           as a Director of Product Management at BGI Americas. Defendant denies any  
26           remaining allegations in Paragraph 21.b. of the First Amended Complaint.
  - 27       c. Defendant admits that Ex. 14 of the First Amended Complaint identifies Yuhan  
28           Zhang as a resident in the San Francisco Bay Area and as having worked in San

1 Jose, California. Defendant further admits that Ex. 14 of the First Amended  
 2 Complaint states that Ms. Zhang “[i]dentified new business opportunities, reached  
 3 out to potential partners and managed existed relationship through email  
 4 campaign, framed contracts and MoU,” and “[o]rganized and supported marketing  
 5 events in North and South America to promote the brand and publicity.”

6 22. Paragraph 22 of the First Amended Complaint contains legal conclusions to which  
 7 no response is required. To the extent that a response is deemed required, Defendant admits that,  
 8 for purposes of this case, BGI Genomics has not contested personal jurisdiction. Defendant  
 9 denies any remaining allegations of Paragraph 22 of the First Amended Complaint.

10 23. Paragraph 23 of the First Amended Complaint contains legal conclusions to which  
 11 no response is required. To the extent that a response is deemed required, Defendant admits that  
 12 BGI Americas is present in California. Defendant denies any remaining allegations of Paragraph  
 13 23 of the First Amended Complaint.

- 14 a. Defendant admits the allegations of Paragraph 23.a. of the First Amended  
 15 Complaint.
- 16 b. Defendant denies the allegations of Paragraph 23.b. of the First Amended  
 17 Complaint.
- 18 c. Paragraph 23.c. of the First Amended Complaint contains legal conclusions to  
 19 which no response is required. To the extent that a response is deemed required,  
 20 Defendant admits that some employees of BGI Americas, including Johan  
 21 Christiaanse, are located in this District. Defendant also admits that Yongwei  
 22 Zhang resides in this District. Defendant denies any remaining allegations of  
 23 Paragraph 23.c. of the First Amended Complaint.

24 24. Paragraph 24 of the First Amended Complaint contains legal conclusions to which  
 25 no response is required. To the extent that a response is deemed required, Defendant admits that  
 26 this Court has jurisdiction over BGI Americas. Defendant denies any remaining allegations of  
 27 Paragraph 24 of the First Amended Complaint.

1       25. Paragraph 25 of the First Amended Complaint contains legal conclusions to which  
2 no response is required. To the extent that a response is deemed required, Defendant denies the  
3 allegations of Paragraph 25 of the First Amended Complaint.

4           a. Defendant admits that a map on MGI Tech's website showed CGI has a San Jose,  
5 California facility that is a "Research Center" and a "Commercial and After-Sales  
6 Service Center." Defendant denies any remaining allegations of Paragraph 25.a.  
7 of the First Amended Complaint.

8           b. Paragraph 25.b. of the First Amended Complaint contains legal conclusions to  
9 which no response is required. To the extent that a response is deemed required,  
10 Defendant admits that the MGI Americas' website, as reflected in Ex. 20 to the  
11 First Amended Complaint, states: "As the leading manufacturer and developer of  
12 BGI's proprietary NGS instrumentation, the global MGI organization provides  
13 comprehensive products and services for fully-automated, real-time, whole picture  
14 and lifelong genetic analysis in life science research." Defendant admits that NGS  
15 stands for "next generation sequencing." Defendant denies any remaining  
16 allegations of Paragraph 25.b. of the First Amended Complaint.

17           c. Paragraph 25.c. of the First Amended Complaint contains legal conclusions to  
18 which no response is required. To the extent that a response is deemed required,  
19 Defendant admits that Duncan Yu presented at the J.P. Morgan Healthcare  
20 Conference in San Francisco, California in January of 2019. Defendant denies any  
21 remaining allegations of Paragraph 25.c. of the First Amended Complaint.

22           d. Defendant denies the allegations of Paragraph 25.d. of the First Amended  
23 Complaint.

24           e. Paragraph 25.e. of the First Amended Complaint contains legal conclusions to  
25 which no response is required. To the extent that a response is deemed required,  
26 Defendant admits that MGI Tech is involved in the research, development and  
27 marketing of the accused products. Defendant denies any remaining allegations of  
28 Paragraph 25.e. of the First Amended Complaint.

1 f. Paragraph 25.f. of the First Amended Complaint contains legal conclusions to  
 2 which no response is required. To the extent that a response is deemed required,  
 3 Defendant admits that MGI Tech's Chief Scientific Officer, Rade Drmanac,  
 4 resides in this District. Defendant further admits that Jia Sophie Liu and Paul  
 5 Lundquist reside in this District. Defendant denies any remaining allegations of  
 6 Paragraph 25.f. of the First Amended Complaint.

7 26. Paragraph 26 of the First Amended Complaint contains legal conclusions to which  
 8 no response is required. To the extent that a response is deemed required, for purposes of this  
 9 case, Defendant does not contest that this Court has jurisdiction over MGI Tech. Defendant  
 10 denies any remaining allegations of Paragraph 26 of the First Amended Complaint.

11 27. Paragraph 27 of the First Amended Complaint contains legal conclusions to which  
 12 no response is required. To the extent that a response is deemed required, Defendant admits that  
 13 MGI Americas is present in California. Defendant denies any remaining allegations of Paragraph  
 14 27 of the First Amended Complaint.

15 a. Paragraph 27.a. of the First Amended Complaint contains legal conclusions to  
 16 which no response is required. To the extent that a response is deemed required,  
 17 Defendant admits that the MGI Americas' website, as reflected in Ex. 20 of the  
 18 First Amended Complaint, states: "As the leading manufacturer and developer of  
 19 BGI's proprietary NGS instrumentation, the global MGI organization provides  
 20 comprehensive products and services for fully-automated, real-time, whole picture  
 21 and lifelong genetic analysis in life science research." Defendant admits that NGS  
 22 stands for "next generation sequencing." Defendant denies any remaining  
 23 allegations of Paragraph 27.a. of the First Amended Complaint.

24 b. Paragraph 27.b. of the First Amended Complaint contains legal conclusions to  
 25 which no response is required. To the extent that a response is deemed required,  
 26 Defendant admits that MGI Americas was involved in the marketing of the  
 27 accused products. Defendant denies any remaining allegations of Paragraph 27.b.  
 28 of the First Amended Complaint.

1                   c. Defendant admits that Ex. 28 of the First Amended Complaint states that MGI  
 2                   Americas' field service engineer, Abigail Frank, "services NGS instruments and  
 3                   lab automated workstations at Complete Genomics in San Jose, as well as external  
 4                   customers throughout North and South America." Defendant denies any  
 5                   remaining allegations of Paragraph 27.c. of the First Amended Complaint.

6                   28. Paragraph 28 of the First Amended Complaint contains legal conclusions to which  
 7                   no response is required. To the extent that a response is deemed required, for purposes of this  
 8                   case only, Defendant does not contest that this Court has jurisdiction over MGI Americas.  
 9                   Defendant denies any remaining allegations of Paragraph 28 of the First Amended Complaint.

10                  29. Paragraph 29 of the First Amended Complaint contains legal conclusions to which  
 11                  no response is required. To the extent that a response is deemed required, Defendant admits that  
 12                  CGI is present in California. Defendant denies any remaining allegations of Paragraph 29 of the  
 13                  First Amended Complaint.

14                  a. Paragraph 29.a. of the First Amended Complaint contains legal conclusions to  
 15                  which no response is required. To the extent that a response is deemed required,  
 16                  Defendant admits that CGI was involved in the research and development of the  
 17                  accused products. Defendant denies any remaining allegations of Paragraph 29.a.  
 18                  of the First Amended Complaint.

19                  b. Paragraph 29.b. of the First Amended Complaint contains legal conclusions to  
 20                  which no response is required. To the extent that a response is deemed required,  
 21                  Defendant admits that according to Exs. 25 & 30-31 of the First Amended  
 22                  Complaint, Suzanne Yokota (a former employee), Shifeng Li, and Rade  
 23                  Drmanac's LinkedIn profiles state they reside in the San Francisco Bay Area.  
 24                  Defendant denies any remaining allegations of Paragraph 29.b. of the First  
 25                  Amended Complaint.

26                  c. Defendant admits that, according to Ex. 32 of the First Amended Complaint, CGI  
 27                  Fluidics Systems Engineer, Wei Wang, states she ensures the proper installation  
 28                  qualification and operation qualification (IQ/OQ), and instrument performance

1 verification (IPV) of NGS systems, such as the BGISEQ-500 in an ISO 17025  
 2 accredited and customer-oriented environment, and that Ms. Wang states she is  
 3 responsible for creating and compiling comprehensive procedural documentation  
 4 for NGS systems, for processes including IQ/OQ, IPV, troubleshooting, repairs,  
 5 replacement parts, calibrations, and maintenance.

6 d. Defendant admits that Exs. 33-34 of the First Amended Complaint describe CGI  
 7 job postings on behalf of certain Defendants for a Senior Regional Sales  
 8 Manager/Director and a Strategic Accounts Specialist/Manager/Director based in  
 9 San Jose, California. Defendant further admits that, according to the job postings,  
 10 the positions, inter alia, would: (i) provide a one touch-point for the global  
 11 customers with the full MGI product portfolio; (ii) navigate orders through the  
 12 customer purchasing process; and (iii) be responsible for leading regional sale  
 13 activities for MGI's NGS Sequencing instruments, reagents, software or solutions  
 14 in the designated region. Defendant denies any remaining allegations of Paragraph  
 15 29.d. of the First Amended Complaint.

16 30. Paragraph 30 of the First Amended Complaint contains legal conclusions to which  
 17 no response is required. To the extent that a response is deemed required, Defendant admits that  
 18 this Court has jurisdiction over CGI. Defendant denies any remaining allegations of Paragraph 30  
 19 of the First Amended Complaint.

20 31. Paragraph 31 of the First Amended Complaint contains legal conclusions to which  
 21 no response is required. To the extent that a response is deemed required, Defendant denies the  
 22 allegations of Paragraph 31 of the First Amended Complaint.

### **INTRADISTRICT ASSIGNMENT**

24 32. Defendant admits that this action is properly assigned to any of the divisions in  
 25 this District. Defendant denies any remaining allegations of Paragraph 32 of the First Amended  
 26 Complaint.

### **BACKGROUND**

#### **Alleged Infringement of the '537 and '200 Patents by the MGISEQ and BGISEQ Systems**

1       33.   Defendant admits that the '537 Patent, entitled "Labelled Nucleotides" issued on  
 2 July 28, 2009, and that the inventors named on the face of the '537 Patent are Shankar  
 3 Balasubramanian, Colin Barnes, Xioahai Liu, John Milton, Harold Swerdlow, and Xioalin Wu.  
 4 Defendant admits that a copy of the '537 Patent appears to be attached to the First Amended  
 5 Complaint as Ex. 1. Defendant lacks sufficient information to admit or deny the remaining  
 6 allegations of Paragraph 33 of the First Amended Complaint, and on that basis, denies them.

7       34.   Defendant admits that the '200 Patent, entitled "Labelled Nucleotides" issued on  
 8 August 9, 2016, and that the inventors named on the face of the '200 Patent are Shankar  
 9 Balasubramanian, Colin Barnes, Xioahai Liu, and John Milton. Defendant admits that a copy of  
 10 the '537 Patent appears to be attached to the First Amended Complaint as Ex. 2. Defendant lacks  
 11 sufficient information to admit or deny the remaining allegations of Paragraph 34 of the First  
 12 Amended Complaint, and on that basis, denies them.

13       35.   Defendant admits that members of the BGI Group launched the BGISEQ-500 in  
 14 October of 2015. Defendant admits that members of the BGI Group launched the BGISEQ-50 in  
 15 November of 2016. Defendant admits that MGI Tech launched the MGISEQ-200 and the  
 16 MGISEQ-2000 in October of 2017. Defendant admits that MGI Tech launched the MGISEQ-T7  
 17 in October of 2018. Defendant admits that the BGISEQ-500, BGISEQ-50, MGISEQ-200,  
 18 MGISEQ-2000, and MGISEQ-T7 are identified on MGI Tech's website and product literature.  
 19 Defendant admits that CGI contributed to the development of the BGISEQ-500. Defendant  
 20 denies any remaining allegations of Paragraph 35 of the First Amended Complaint.

21       36.   Defendant admits that Ex. 22 of the First Amended Complaint states that  
 22 "[a]ccording to MGI CSO Rade Drmanac, the current sequencing chemistry relies on stepwise  
 23 sequencing-by-synthesis (SBS) where 3'-blocked nucleotides are labeled with cleavable  
 24 fluorescent dyes, which leave behind a molecular 'scar' after they are removed. This chemistry is  
 25 similar to that used by Illumina and others." Defendant denies any remaining allegations of  
 26 Paragraph 36 of the Complaint.

27       37.   Paragraph 37 of the First Amended Complaint contains legal conclusions to which  
 28 no response is required. To the extent that a response is deemed required, Defendant admits that

1 a claim chart is attached to the First Amended Complaint as Ex. 3. To the extent Illumina seeks  
2 to incorporate Ex. 3 of the First Amended Complaint as an allegation, the allegations do not  
3 comply with Federal Rule of Civil Procedure 8(d), which requires that “each allegation must be  
4 simple, concise, and direct.” Furthermore, the allegations in Ex. 3 of the First Amended  
5 Complaint are vague, ambiguous, and lacking specificity as Illumina has indicated that Ex. 3 of  
6 the First Amended Complaint is not intended to limit Illumina’s right to modify the chart, and that  
7 the chart is “preliminary and exemplary.” Defendant denies any remaining allegations of  
8 Paragraph 37 of the First Amended Complaint.

9       38. Paragraph 38 of the First Amended Complaint contains legal conclusions to which  
10 no response is required. To the extent that a response is deemed required, Defendant admits that  
11 certain BGISEQ and MGISEQ sequencers have been used, in the past, at the San Jose, California  
12 facility rented by CGI. Defendant denies any remaining allegations of Paragraph 38 of the First  
13 Amended Complaint.

14       39. Paragraph 39 of the First Amended Complaint contains legal conclusions to which  
15 no response is required. To the extent that a response is deemed required, Defendant denies the  
16 allegations of Paragraph 39 of the First Amended Complaint.

17       40. Paragraph 40 of the First Amended Complaint contains legal conclusions to which  
18 no response is required. To the extent that a response is deemed required, Defendant denies the  
19 allegations of Paragraph 40 of the First Amended Complaint.

20       41. Paragraph 41 of the First Amended Complaint contains legal conclusions to which  
21 no response is required. To the extent that a response is deemed required, Defendant admits that  
22 a claim chart is attached to the First Amended Complaint as Ex. 4. To the extent Illumina seeks  
23 to incorporate Ex. 4 of the First Amended Complaint as an allegation, the allegations do not  
24 comply with Federal Rule of Civil Procedure 8(d), which requires that “each allegation must be  
25 simple, concise, and direct.” Furthermore, the allegations in Ex. 4 of the First Amended  
26 Complaint are vague, ambiguous, and lacking specificity as Illumina has indicated that Ex. 4 of  
27 the First Amended Complaint is not intended to limit Illumina’s right to modify the chart, and that  
28

the chart is “preliminary and exemplary.” Defendant denies any remaining allegations of Paragraph 41 of the First Amended Complaint.

42. Paragraph 42 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant admits that certain BGISEQ and MGISEQ have been used, in the past, by Complete Genomics at the San Jose, California facility. Defendant denies any remaining allegations of Paragraph 42 of the First Amended Complaint.

43. Paragraph 43 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies the allegations of Paragraph 43 of the First Amended Complaint.

44. Paragraph 44 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies the allegations of Paragraph 44 of the First Amended Complaint.

## **COUNT I**

## **Alleged Infringement of U.S. Patent No. 7,566,537 (“’537 Patent)**

45. Defendant repeats and realleges its answers to Paragraphs 1-44 of the First Amended Complaint as if fully set forth herein.

46. Paragraph 46 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies the allegations of Paragraph 46 of the First Amended Complaint.

## **BGI Genomics' Alleged Infringement of the '537 Patent**

47. Paragraph 47 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant admits that BGI Genomics has had knowledge of the '537 Patent since at least October 5, 2017. Defendant denies any remaining allegations of Paragraph 47 of the First Amended Complaint.

48. Paragraph 48 of the First Amended Complaint contains legal conclusions to which no response is required. To the extent that a response is deemed required, Defendant denies the allegations of Paragraph 48 of the First Amended Complaint.

1                   Alleged Direct Infringement by BGI Genomics

2       49. Paragraph 49 of the First Amended Complaint contains legal conclusions to which  
 3 no response is required. To the extent that a response is deemed required, Defendant denies the  
 4 allegations of Paragraph 49 of the First Amended Complaint.

5       50. Paragraph 50 of the First Amended Complaint contains legal conclusions to which  
 6 no response is required. To the extent that a response is deemed required, Defendant admits that  
 7 CGI contributed to the development of the BGISEQ-500. Defendant denies any remaining  
 8 allegations of Paragraph 50 of the First Amended Complaint.

9       51. Paragraph 51 of the First Amended Complaint contains legal conclusions to which  
 10 no response is required. To the extent that a response is deemed required, Defendant admits that  
 11 Ex. 5 of the First Amended Complaint depicts “Representative Offices” in San Francisco, Los  
 12 Angeles, and San Diego, California and an “Office/Lab” in San Jose, California, and that CGI  
 13 identified BGI Genomics as a real-party-in-interest in IPR proceedings directed to the ’537  
 14 Patent. Defendant denies any remaining allegations of Paragraph 51 of the First Amended  
 15 Complaint.

16       52. Paragraph 52 of the First Amended Complaint contains legal conclusions to which  
 17 no response is required. To the extent that a response is deemed required, Defendant admits that  
 18 BGI Genomics has had a presence at industry trade shows in California, including those listed in  
 19 Paragraph 52 of the First Amended Complaint and that BGI Genomics’ CEO, Ye Yin, presented  
 20 at the J.P. Morgan Health Care Conference in January of 2018. Defendant denies any remaining  
 21 allegations of Paragraph 52 of the First Amended Complaint.

22                   Alleged Induced Infringement by BGI Genomics

23       53. Paragraph 53 of the First Amended Complaint contains legal conclusions to which  
 24 no response is required. To the extent that a response is deemed required, Defendant denies the  
 25 allegations of Paragraph 53 of the First Amended Complaint.

26       54. Paragraph 54 of the First Amended Complaint contains legal conclusions to which  
 27 no response is required. To the extent that a response is deemed required, Defendant denies the  
 28 allegations of Paragraph 54 of the First Amended Complaint.

1       55. Paragraph 55 of the First Amended Complaint contains legal conclusions to which  
 2 no response is required. To the extent that a response is deemed required, Defendant denies the  
 3 allegations of Paragraph 55 of the First Amended Complaint.

4       56. Paragraph 56 of the First Amended Complaint contains legal conclusions to which  
 5 no response is required. To the extent that a response is deemed required, Defendant denies the  
 6 allegations of Paragraph 56 of the First Amended Complaint.

7       57. Paragraph 57 of the First Amended Complaint contains legal conclusions to which  
 8 no response is required. To the extent that a response is deemed required, Defendant denies the  
 9 allegations of Paragraph 57 of the First Amended Complaint.

10      58. Paragraph 58 of the First Amended Complaint contains legal conclusions to which  
 11 no response is required. To the extent that a response is deemed required, Defendant denies the  
 12 allegations of Paragraph 58 of the First Amended Complaint.

13      59. Paragraph 59 of the First Amended Complaint contains legal conclusions to which  
 14 no response is required. To the extent that a response is deemed required, Defendant denies the  
 15 allegations of Paragraph 59 of the First Amended Complaint.

16      60. Paragraph 60 of the First Amended Complaint contains legal conclusions to which  
 17 no response is required. To the extent that a response is deemed required, Defendant denies the  
 18 allegations of Paragraph 60 of the First Amended Complaint.

19                  Alleged Contributory Infringement by BGI Genomics

20      61. Paragraph 61 of the First Amended Complaint contains legal conclusions to which  
 21 no response is required. To the extent that a response is deemed required, Defendant denies the  
 22 allegations of Paragraph 61 of the First Amended Complaint.

23      62. Paragraph 62 of the First Amended Complaint contains legal conclusions to which  
 24 no response is required. To the extent that a response is deemed required, Defendant denies the  
 25 allegations of Paragraph 62 of the First Amended Complaint.

26                  Alleged Willful Infringement by BGI Genomics

1       63. Paragraph 63 of the First Amended Complaint contains legal conclusions to which  
 2 no response is required. To the extent that a response is deemed required, Defendant denies the  
 3 allegations of Paragraph 63 of the First Amended Complaint.

4       64. Paragraph 64 of the First Amended Complaint contains legal conclusions to which  
 5 no response is required. To the extent that a response is deemed required, Defendant denies the  
 6 allegations of Paragraph 64 of the First Amended Complaint.

7       65. Paragraph 65 of the First Amended Complaint contains legal conclusions to which  
 8 no response is required. To the extent that a response is deemed required, Defendant denies the  
 9 allegations of Paragraph 65 of the First Amended Complaint.

10      **BGI Americas' Alleged Infringement of the '537 Patent**

11      66. Paragraph 66 of the First Amended Complaint contains legal conclusions to which  
 12 no response is required. To the extent that a response is deemed required, Defendant admits that  
 13 BGI Americas has had knowledge of the '537 Patent since at least October 5, 2017. Defendant  
 14 denies any remaining allegations of Paragraph 66 of the First Amended Complaint.

15      Alleged Direct Infringement by BGI Americas

16      67. Paragraph 67 of the First Amended Complaint contains legal conclusions to which  
 17 no response is required. To the extent that a response is deemed required, Defendant denies the  
 18 allegations of Paragraph 67 of the First Amended Complaint.

19      Alleged Induced Infringement by BGI Americas

20      68. Paragraph 68 of the First Amended Complaint contains legal conclusions to which  
 21 no response is required. To the extent that a response is deemed required, Defendant denies the  
 22 allegations of Paragraph 68 of the First Amended Complaint.

23      69. Paragraph 69 of the First Amended Complaint contains legal conclusions to which  
 24 no response is required. To the extent that a response is deemed required, Defendant denies the  
 25 allegations of Paragraph 69 of the First Amended Complaint.

26      70. Paragraph 70 of the First Amended Complaint contains legal conclusions to which  
 27 no response is required. To the extent that a response is deemed required, Defendant denies the  
 28 allegations of Paragraph 70 of the First Amended Complaint.

1       71. Paragraph 71 of the First Amended Complaint contains legal conclusions to which  
 2 no response is required. To the extent that a response is deemed required, Defendant denies the  
 3 allegations of Paragraph 71 of the First Amended Complaint.

4       72. Paragraph 72 of the First Amended Complaint contains legal conclusions to which  
 5 no response is required. To the extent that a response is deemed required, Defendant denies the  
 6 allegations of Paragraph 72 of the First Amended Complaint.

7       73. Paragraph 73 of the First Amended Complaint contains legal conclusions to which  
 8 no response is required. To the extent that a response is deemed required, Defendant denies the  
 9 allegations of Paragraph 73 of the First Amended Complaint.

10      Alleged Contributory Infringement by BGI Americas

11      74. Paragraph 74 of the First Amended Complaint contains legal conclusions to which  
 12 no response is required. To the extent that a response is deemed required, Defendant denies the  
 13 allegations of Paragraph 74 of the First Amended Complaint.

14      75. Paragraph 75 of the First Amended Complaint contains legal conclusions to which  
 15 no response is required. To the extent that a response is deemed required, Defendant denies the  
 16 allegations of Paragraph 75 of the First Amended Complaint.

17      Alleged Willful Infringement by BGI Americas

18      76. Paragraph 76 of the First Amended Complaint contains legal conclusions to which  
 19 no response is required. To the extent that a response is deemed required, Defendant denies the  
 20 allegations of Paragraph 76 of the First Amended Complaint.

21      77. Paragraph 77 of the First Amended Complaint contains legal conclusions to which  
 22 no response is required. To the extent that a response is deemed required, Defendant denies the  
 23 allegations of Paragraph 77 of the First Amended Complaint.

24      78. Paragraph 78 of the First Amended Complaint contains legal conclusions to which  
 25 no response is required. To the extent that a response is deemed required, Defendant denies the  
 26 allegations of Paragraph 78 of the First Amended Complaint.

27      **MGI Tech's Alleged Infringement of the '537 Patent**

1       79. Paragraph 79 of the First Amended Complaint contains legal conclusions to which  
 2 no response is required. To the extent that a response is deemed required, Defendant denies the  
 3 allegations of Paragraph 79 of the First Amended Complaint.

4                  Alleged Direct Infringement by MGI Tech

5       80. Paragraph 80 of the First Amended Complaint contains legal conclusions to which  
 6 no response is required. To the extent that a response is deemed required, Defendant denies the  
 7 allegations of Paragraph 80 of the First Amended Complaint.

8                  Alleged Induced Infringement by MGI Tech

9       81. Paragraph 81 of the First Amended Complaint contains legal conclusions to which  
 10 no response is required. To the extent that a response is deemed required, Defendant denies the  
 11 allegations of Paragraph 81 of the First Amended Complaint.

12      82. Paragraph 82 of the First Amended Complaint contains legal conclusions to which  
 13 no response is required. To the extent that a response is deemed required, Defendant denies the  
 14 allegations of Paragraph 82 of the First Amended Complaint.

15      83. Paragraph 83 of the First Amended Complaint contains legal conclusions to which  
 16 no response is required. To the extent that a response is deemed required, Defendant denies the  
 17 allegations of Paragraph 83 of the First Amended Complaint.<sup>2</sup>

18      84. Paragraph 84 of the First Amended Complaint contains legal conclusions to which  
 19 no response is required. To the extent that a response is deemed required, Defendant denies the  
 20 allegations of Paragraph 84 of the First Amended Complaint.

21      85. Paragraph 85 of the First Amended Complaint contains legal conclusions to which  
 22 no response is required. To the extent that a response is deemed required, Defendant denies the  
 23 allegations of Paragraph 85 of the First Amended Complaint.

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26      <sup>2</sup> Defendant notes that there is an un-numbered paragraph appearing after Paragraph 83 of  
 27 Illumina's First Amended Complaint. See D.N. 52 at 26:4-11. This un-numbered paragraph of  
 28 the First Amended Complaint contains legal conclusions to which no response is required. To the  
 extent that a response is deemed required, Defendant denies the allegations of this paragraph.

1       86. Paragraph 86 of the First Amended Complaint contains legal conclusions to which  
 2 no response is required. To the extent that a response is deemed required, Defendant denies the  
 3 allegations of Paragraph 86 of the First Amended Complaint.

4       87. Paragraph 87 of the First Amended Complaint contains legal conclusions to which  
 5 no response is required. To the extent that a response is deemed required, Defendant denies the  
 6 allegations of Paragraph 87 of the First Amended Complaint.

7       Alleged Contributory Infringement by MGI Tech

8       88. Paragraph 88 of the First Amended Complaint contains legal conclusions to which  
 9 no response is required. To the extent that a response is deemed required, Defendant denies the  
 10 allegations of Paragraph 88 of the First Amended Complaint.

11       89. Paragraph 89 of the First Amended Complaint contains legal conclusions to which  
 12 no response is required. To the extent that a response is deemed required, Defendant denies the  
 13 allegations of Paragraph 89 of the First Amended Complaint.

14       Alleged Willful Infringement by MGI Tech

15       90. Paragraph 90 of the First Amended Complaint contains legal conclusions to which  
 16 no response is required. To the extent that a response is deemed required, Defendant denies the  
 17 allegations of Paragraph 90 of the First Amended Complaint.

18       91. Paragraph 91 of the First Amended Complaint contains legal conclusions to which  
 19 no response is required. To the extent that a response is deemed required, Defendant denies the  
 20 allegations of Paragraph 91 of the First Amended Complaint.

21       92. Paragraph 92 of the First Amended Complaint contains legal conclusions to which  
 22 no response is required. To the extent that a response is deemed required, Defendant denies the  
 23 allegations of Paragraph 92 of the First Amended Complaint.

24       MGI Americas' Alleged Infringement of the '537 Patent

25       93. Paragraph 93 of the First Amended Complaint contains legal conclusions to which  
 26 no response is required. To the extent that a response is deemed required, Defendant denies the  
 27 allegations of Paragraph 93 of the First Amended Complaint.

28       Alleged Direct Infringement by MGI Americas

1       94. Paragraph 94 of the First Amended Complaint contains legal conclusions to which  
 2 no response is required. To the extent that a response is deemed required, Defendant admits that  
 3 MGI Americas has used certain BGISEQ and MGISEQ sequencers in the past, at the San Jose,  
 4 California facility rented by CGI. Defendant denies any remaining allegations of Paragraph 94 of  
 5 the First Amended Complaint.

6       Alleged Induced Infringement by MGI Americas

7       95. Paragraph 95 of the First Amended Complaint contains legal conclusions to which  
 8 no response is required. To the extent that a response is deemed required, Defendant denies the  
 9 allegations of Paragraph 95 of the First Amended Complaint.

10      96. Paragraph 96 of the First Amended Complaint contains legal conclusions to which  
 11 no response is required. To the extent that a response is deemed required, Defendant denies the  
 12 allegations of Paragraph 96 of the First Amended Complaint.

13      97. Paragraph 97 of the First Amended Complaint contains legal conclusions to which  
 14 no response is required. To the extent that a response is deemed required, Defendant denies the  
 15 allegations of Paragraph 97 of the First Amended Complaint.

16      98. Paragraph 98 of the First Amended Complaint contains legal conclusions to which  
 17 no response is required. To the extent that a response is deemed required, Defendant denies the  
 18 allegations of Paragraph 98 of the First Amended Complaint.

19      99. Paragraph 99 of the First Amended Complaint contains legal conclusions to which  
 20 no response is required. To the extent that a response is deemed required, Defendant denies the  
 21 allegations of Paragraph 99 of the First Amended Complaint.

22      100. Paragraph 100 of the First Amended Complaint contains legal conclusions to  
 23 which no response is required. To the extent that a response is deemed required, Defendant  
 24 denies the allegations of Paragraph 100 of the First Amended Complaint.

25      101. Paragraph 101 of the First Amended Complaint contains legal conclusions to  
 26 which no response is required. To the extent that a response is deemed required, Defendant  
 27 denies the allegations of Paragraph 101 of the First Amended Complaint.

1       102. Paragraph 102 of the First Amended Complaint contains legal conclusions to  
 2 which no response is required. To the extent that a response is deemed required, Defendant  
 3 denies the allegations of Paragraph 102 of the First Amended Complaint.

4                  Alleged Contributory Infringement by MGI Americas

5       103. Paragraph 103 of the First Amended Complaint contains legal conclusions to  
 6 which no response is required. To the extent that a response is deemed required, Defendant  
 7 denies the allegations of Paragraph 103 of the First Amended Complaint.

8       104. Paragraph 104 of the First Amended Complaint contains legal conclusions to  
 9 which no response is required. To the extent that a response is deemed required, Defendant  
 10 denies the allegations of Paragraph 104 of the First Amended Complaint.

11                  Alleged Willful Infringement by MGI Americas

12      105. Paragraph 105 of the First Amended Complaint contains legal conclusions to  
 13 which no response is required. To the extent that a response is deemed required, Defendant  
 14 denies the allegations of Paragraph 105 of the First Amended Complaint.

15      106. Paragraph 106 of the First Amended Complaint contains legal conclusions to  
 16 which no response is required. To the extent that a response is deemed required, Defendant  
 17 denies the allegations of Paragraph 106 of the First Amended Complaint.

18      107. Paragraph 107 of the First Amended Complaint contains legal conclusions to  
 19 which no response is required. To the extent that a response is deemed required, Defendant  
 20 denies the allegations of Paragraph 107 of the First Amended Complaint.

21                  CGI's Alleged Infringement of the '537 Patent

22      108. Paragraph 108 of the First Amended Complaint contains legal conclusions to  
 23 which no response is required. To the extent that a response is deemed required, Defendant  
 24 denies the allegations of Paragraph 108 of the First Amended Complaint.

25                  Alleged Direct Infringement by CGI

26      109. Paragraph 109 of the First Amended Complaint contains legal conclusions to  
 27 which no response is required. To the extent that a response is deemed required, Defendant  
 28 admits that CGI has used certain BGISEQ and MGISEQ sequencers, in the past, at its San Jose,

1 California facility. Defendant denies any remaining allegations of Paragraph 109 of the First  
 2 Amended Complaint.

3 Alleged Induced Infringement by CGI

4 110. Paragraph 110 of the First Amended Complaint contains legal conclusions to  
 5 which no response is required. To the extent that a response is deemed required, Defendant  
 6 denies the allegations of Paragraph 110 of the First Amended Complaint.

7 111. Paragraph 111 of the First Amended Complaint contains legal conclusions to  
 8 which no response is required. To the extent that a response is deemed required, Defendant  
 9 denies the allegations of Paragraph 111 of the First Amended Complaint.

10 112. Paragraph 112 of the First Amended Complaint contains legal conclusions to  
 11 which no response is required. To the extent that a response is deemed required, Defendant  
 12 denies the allegations of Paragraph 112 of the First Amended Complaint.

13 113. Paragraph 113 of the First Amended Complaint contains legal conclusions to  
 14 which no response is required. To the extent that a response is deemed required, Defendant  
 15 denies the allegations of Paragraph 113 of the First Amended Complaint.

16 114. Paragraph 114 of the First Amended Complaint contains legal conclusions to  
 17 which no response is required. To the extent that a response is deemed required, Defendant  
 18 denies the allegations of Paragraph 114 of the First Amended Complaint.

19 115. Paragraph 115 of the First Amended Complaint contains legal conclusions to  
 20 which no response is required. To the extent that a response is deemed required, Defendant  
 21 denies the allegations of Paragraph 115 of the First Amended Complaint.

22 116. Paragraph 116 of the First Amended Complaint contains legal conclusions to  
 23 which no response is required. To the extent that a response is deemed required, Defendant  
 24 denies the allegations of Paragraph 116 of the First Amended Complaint.

25 117. Paragraph 117 of the First Amended Complaint contains legal conclusions to  
 26 which no response is required. To the extent that a response is deemed required, Defendant  
 27 denies the allegations of Paragraph 117 of the First Amended Complaint.

28 Alleged Contributory Infringement by CGI

1       118. Paragraph 118 of the First Amended Complaint contains legal conclusions to  
 2 which no response is required. To the extent that a response is deemed required, Defendant  
 3 denies the allegations of Paragraph 118 of the First Amended Complaint.

4       119. Paragraph 119 of the First Amended Complaint contains legal conclusions to  
 5 which no response is required. To the extent that a response is deemed required, Defendant  
 6 denies the allegations of Paragraph 119 of the First Amended Complaint.

7       Alleged Willful Infringement by CGI

8       120. Paragraph 120 of the First Amended Complaint contains legal conclusions to  
 9 which no response is required. To the extent that a response is deemed required, Defendant  
 10 admits that CGI has had knowledge of the '537 Patent since at least October 5, 2017. Defendant  
 11 denies any remaining allegations of Paragraph 120 of the First Amended Complaint.

12       121. Paragraph 121 of the First Amended Complaint contains legal conclusions to  
 13 which no response is required. To the extent that a response is deemed required, Defendant  
 14 denies the allegations of Paragraph 121 of the First Amended Complaint.

15       122. Paragraph 122 of the First Amended Complaint contains legal conclusions to  
 16 which no response is required. To the extent that a response is deemed required, Defendant  
 17 denies the allegations of Paragraph 122 of the First Amended Complaint.

18       **COUNT II**

19       **Alleged Infringement of U.S. Patent No. 9,410,200 ("200 Patent")**

20       123. Defendant repeats and realleges its answers to Paragraphs 1-122 of the First  
 21 Amended Complaint as if fully set forth herein.

22       124. Paragraph 124 of the First Amended Complaint contains legal conclusions to  
 23 which no response is required. To the extent that a response is deemed required, Defendant  
 24 denies the allegations of Paragraph 124 of the First Amended Complaint.

25       **BGI Genomics' Alleged Infringement of the '200 Patent**

26       125. Paragraph 125 of the First Amended Complaint contains legal conclusions to  
 27 which no response is required. To the extent that a response is deemed required, Defendant  
 28 denies the allegations of Paragraph 125 of the First Amended Complaint.

1       126. Paragraph 126 of the First Amended Complaint contains legal conclusions to  
 2 which no response is required. To the extent that a response is deemed required, Defendant  
 3 denies the allegations of Paragraph 126 of the First Amended Complaint.

4                  Alleged Direct Infringement by BGI Genomics

5       127. Paragraph 127 of the First Amended Complaint contains legal conclusions to  
 6 which no response is required. To the extent that a response is deemed required, Defendant  
 7 denies the allegations of Paragraph 127 of the First Amended Complaint.

8       128. Paragraph 128 of the First Amended Complaint contains legal conclusions to  
 9 which no response is required. To the extent that a response is deemed required, Defendant  
 10 admits that CGI contributed to the development of the BGISEQ-500. Defendant denies any  
 11 remaining allegations of Paragraph 128 of the First Amended Complaint.

12      129. Paragraph 129 of the First Amended Complaint contains legal conclusions to  
 13 which no response is required. To the extent that a response is deemed required, Defendant  
 14 admits that Ex. 5 of the First Amended Complaint depicts “Representative Offices” in San  
 15 Francisco, Los Angeles, and San Diego, California and an “Office/Lab” in San Jose, California,  
 16 and that CGI identified BGI Genomics as a real-party-in-interest in IPR proceedings directed to  
 17 the ’537 Patent. Defendant denies any remaining allegations of Paragraph 129 of the First  
 18 Amended Complaint.

19      130. Paragraph 130 of the First Amended Complaint contains legal conclusions to  
 20 which no response is required. To the extent that a response is deemed required, Defendant  
 21 admits that BGI Genomics has had a presence at industry trade shows in California, including  
 22 those listed in Paragraph 130 of the First Amended Complaint and that BGI Genomics’ CEO, Ye  
 23 Yin, presented at the J.P. Morgan Health Care Conference in January of 2018. Defendant denies  
 24 any remaining allegations of Paragraph 130 of the First Amended Complaint.

25                  Alleged Induced Infringement by BGI Genomics

26      131. Paragraph 131 of the First Amended Complaint contains legal conclusions to  
 27 which no response is required. To the extent that a response is deemed required, Defendant  
 28 denies the allegations of Paragraph 131 of the First Amended Complaint.

1       132. Paragraph 132 of the First Amended Complaint contains legal conclusions to  
2 which no response is required. To the extent that a response is deemed required, Defendant  
3 denies the allegations of Paragraph 132 of the First Amended Complaint.

4       133. Paragraph 133 of the First Amended Complaint contains legal conclusions to  
5 which no response is required. To the extent that a response is deemed required, Defendant  
6 denies the allegations of Paragraph 133 of the First Amended Complaint.

7       134. Paragraph 134 of the First Amended Complaint contains legal conclusions to  
8 which no response is required. To the extent that a response is deemed required, Defendant  
9 denies the allegations of Paragraph 134 of the First Amended Complaint.

10       135. Paragraph 135 of the First Amended Complaint contains legal conclusions to  
11 which no response is required. To the extent that a response is deemed required, Defendant  
12 denies the allegations of Paragraph 135 of the First Amended Complaint.

13       136. Paragraph 136 of the First Amended Complaint contains legal conclusions to  
14 which no response is required. To the extent that a response is deemed required, Defendant  
15 denies the allegations of Paragraph 136 of the First Amended Complaint.

16       137. Paragraph 137 of the First Amended Complaint contains legal conclusions to  
17 which no response is required. To the extent that a response is deemed required, Defendant  
18 denies the allegations of Paragraph 137 of the First Amended Complaint.

19       138. Paragraph 138 of the First Amended Complaint contains legal conclusions to  
20 which no response is required. To the extent that a response is deemed required, Defendant  
21 denies the allegations of Paragraph 138 of the First Amended Complaint.

22       Alleged Contributory Infringement by BGI Genomics

23       139. Paragraph 139 of the First Amended Complaint contains legal conclusions to  
24 which no response is required. To the extent that a response is deemed required, Defendant  
25 denies the allegations of Paragraph 139 of the First Amended Complaint.

26       140. Paragraph 140 of the First Amended Complaint contains legal conclusions to  
27 which no response is required. To the extent that a response is deemed required, Defendant  
28 denies the allegations of Paragraph 140 of the First Amended Complaint.

1           Alleged Willful Infringement by BGI Genomics

2       141. Paragraph 141 of the First Amended Complaint contains legal conclusions to  
 3 which no response is required. To the extent that a response is deemed required, Defendant  
 4 denies the allegations of Paragraph 141 of the First Amended Complaint.

5       142. Paragraph 142 of the First Amended Complaint contains legal conclusions to  
 6 which no response is required. To the extent that a response is deemed required, Defendant  
 7 denies the allegations of Paragraph 142 of the First Amended Complaint.

8       143. Paragraph 143 of the First Amended Complaint contains legal conclusions to  
 9 which no response is required. To the extent that a response is deemed required, Defendant  
 10 denies the allegations of Paragraph 143 of the First Amended Complaint.

11           **BGI Americas' Alleged Infringement of the '200 Patent**

12       144. Paragraph 144 of the First Amended Complaint contains legal conclusions to  
 13 which no response is required. To the extent that a response is deemed required, Defendant  
 14 denies the allegations of Paragraph 144 of the First Amended Complaint.

15           Alleged Direct Infringement by BGI Americas

16       145. Paragraph 145 of the First Amended Complaint contains legal conclusions to  
 17 which no response is required. To the extent that a response is deemed required, Defendant  
 18 denies the allegations of Paragraph 145 of the First Amended Complaint.

19           Alleged Induced Infringement by BGI Americas

20       146. Paragraph 146 of the First Amended Complaint contains legal conclusions to  
 21 which no response is required. To the extent that a response is deemed required, Defendant  
 22 denies the allegations of Paragraph 146 of the First Amended Complaint.

23       147. Paragraph 147 of the First Amended Complaint contains legal conclusions to  
 24 which no response is required. To the extent that a response is deemed required, Defendant  
 25 denies the allegations of Paragraph 147 of the First Amended Complaint.

26       148. Paragraph 148 of the First Amended Complaint contains legal conclusions to  
 27 which no response is required. To the extent that a response is deemed required, Defendant  
 28 denies the allegations of Paragraph 148 of the First Amended Complaint.

1       149. Paragraph 149 of the First Amended Complaint contains legal conclusions to  
 2 which no response is required. To the extent that a response is deemed required, Defendant  
 3 denies the allegations of Paragraph 149 of the First Amended Complaint.

4       150. Paragraph 150 of the First Amended Complaint contains legal conclusions to  
 5 which no response is required. To the extent that a response is deemed required, Defendant  
 6 denies the allegations of Paragraph 150 of the First Amended Complaint.

7       151. Paragraph 151 of the First Amended Complaint contains legal conclusions to  
 8 which no response is required. To the extent that a response is deemed required, Defendant  
 9 denies the allegations of Paragraph 151 of the First Amended Complaint.

10      Alleged Contributory Infringement by BGI Americas

11      152. Paragraph 152 of the First Amended Complaint contains legal conclusions to  
 12 which no response is required. To the extent that a response is deemed required, Defendant  
 13 denies the allegations of Paragraph 152 of the First Amended Complaint.

14      153. Paragraph 153 of the First Amended Complaint contains legal conclusions to  
 15 which no response is required. To the extent that a response is deemed required, Defendant  
 16 denies the allegations of Paragraph 153 of the First Amended Complaint.

17      Alleged Willful Infringement by BGI Americas

18      154. Paragraph 154 of the First Amended Complaint contains legal conclusions to  
 19 which no response is required. To the extent that a response is deemed required, Defendant  
 20 denies the allegations of Paragraph 154 of the First Amended Complaint.

21      155. Paragraph 155 of the First Amended Complaint contains legal conclusions to  
 22 which no response is required. To the extent that a response is deemed required, Defendant  
 23 denies the allegations of Paragraph 155 of the First Amended Complaint.

24      156. Paragraph 156 of the First Amended Complaint contains legal conclusions to  
 25 which no response is required. To the extent that a response is deemed required, Defendant  
 26 denies the allegations of Paragraph 156 of the First Amended Complaint.

27      **MGI Tech's Alleged Infringement of the '200 Patent**

1       157. Paragraph 157 of the First Amended Complaint contains legal conclusions to  
2 which no response is required. To the extent that a response is deemed required, Defendant  
3 denies the allegations of Paragraph 157 of the First Amended Complaint.

4                  Alleged Direct Infringement by MGI Tech

5       158. Paragraph 158 of the First Amended Complaint contains legal conclusions to  
6 which no response is required. To the extent that a response is deemed required, Defendant  
7 denies the allegations of Paragraph 158 of the First Amended Complaint.

8                  Alleged Induced Infringement by MGI Tech

9       159. Paragraph 159 of the First Amended Complaint contains legal conclusions to  
10 which no response is required. To the extent that a response is deemed required, Defendant  
11 denies the allegations of Paragraph 159 of the First Amended Complaint.

12      160. Paragraph 160 of the First Amended Complaint contains legal conclusions to  
13 which no response is required. To the extent that a response is deemed required, Defendant  
14 denies the allegations of Paragraph 160 of the First Amended Complaint.

15      161. Paragraph 161 of the First Amended Complaint contains legal conclusions to  
16 which no response is required. To the extent that a response is deemed required, Defendant  
17 denies the allegations of Paragraph 161 of the First Amended Complaint.

18      162. Paragraph 162 of the First Amended Complaint contains legal conclusions to  
19 which no response is required. To the extent that a response is deemed required, Defendant  
20 denies the allegations of Paragraph 162 of the First Amended Complaint.

21      163. Paragraph 163 of the First Amended Complaint contains legal conclusions to  
22 which no response is required. To the extent that a response is deemed required, Defendant  
23 denies the allegations of Paragraph 163 of the First Amended Complaint.

24      164. Paragraph 164 of the First Amended Complaint contains legal conclusions to  
25 which no response is required. To the extent that a response is deemed required, Defendant  
26 denies the allegations of Paragraph 164 of the First Amended Complaint.

1       165. Paragraph 165 of the First Amended Complaint contains legal conclusions to  
 2 which no response is required. To the extent that a response is deemed required, Defendant  
 3 denies the allegations of Paragraph 165 of the First Amended Complaint.

4       166. Paragraph 166 of the First Amended Complaint contains legal conclusions to  
 5 which no response is required. To the extent that a response is deemed required, Defendant  
 6 denies the allegations of Paragraph 166 of the First Amended Complaint.

7       Alleged Contributory Infringement by MGI Tech

8       167. Paragraph 167 of the First Amended Complaint contains legal conclusions to  
 9 which no response is required. To the extent that a response is deemed required, Defendant  
 10 denies the allegations of Paragraph 167 of the First Amended Complaint.

11      168. Paragraph 168 of the First Amended Complaint contains legal conclusions to  
 12 which no response is required. To the extent that a response is deemed required, Defendant  
 13 denies the allegations of Paragraph 168 of the First Amended Complaint.

14      Alleged Willful Infringement by MGI Tech

15      169. Paragraph 169 of the First Amended Complaint contains legal conclusions to  
 16 which no response is required. To the extent that a response is deemed required, Defendant  
 17 denies the allegations of Paragraph 169 of the First Amended Complaint.

18      170. Paragraph 170 of the First Amended Complaint contains legal conclusions to  
 19 which no response is required. To the extent that a response is deemed required, Defendant  
 20 denies the allegations of Paragraph 170 of the First Amended Complaint.

21      171. Paragraph 171 of the First Amended Complaint contains legal conclusions to  
 22 which no response is required. To the extent that a response is deemed required, Defendant  
 23 denies the allegations of Paragraph 171 of the First Amended Complaint.

24      MGI Americas' Alleged Infringement of the '200 Patent

25      172. Paragraph 172 of the First Amended Complaint contains legal conclusions to  
 26 which no response is required. To the extent that a response is deemed required, Defendant  
 27 denies the allegations of Paragraph 172 of the First Amended Complaint.

1           Alleged Direct Infringement by MGI Americas

2       173. Paragraph 173 of the First Amended Complaint contains legal conclusions to  
 3 which no response is required. To the extent that a response is deemed required, Defendant  
 4 admits that MGI Americas has used certain BGISEQ and MGISEQ sequencers, in the past, at the  
 5 San Jose, California facility rented by CGI. Defendant denies any remaining allegations of  
 6 Paragraph 173 of the First Amended Complaint.

7           Alleged Induced Infringement by MGI Americas

8       174. Paragraph 174 of the First Amended Complaint contains legal conclusions to  
 9 which no response is required. To the extent that a response is deemed required, Defendant  
 10 denies the allegations of Paragraph 174 of the First Amended Complaint.

11      175. Paragraph 175 of the First Amended Complaint contains legal conclusions to  
 12 which no response is required. To the extent that a response is deemed required, Defendant  
 13 denies the allegations of Paragraph 175 of the First Amended Complaint.

14      176. Paragraph 176 of the First Amended Complaint contains legal conclusions to  
 15 which no response is required. To the extent that a response is deemed required, Defendant  
 16 denies the allegations of Paragraph 176 of the First Amended Complaint.

17      177. Paragraph 177 of the First Amended Complaint contains legal conclusions to  
 18 which no response is required. To the extent that a response is deemed required, Defendant  
 19 denies the allegations of Paragraph 177 of the First Amended Complaint.

20      178. Paragraph 178 of the First Amended Complaint contains legal conclusions to  
 21 which no response is required. To the extent that a response is deemed required, Defendant  
 22 denies the allegations of Paragraph 178 of the First Amended Complaint.

23      179. Paragraph 179 of the First Amended Complaint contains legal conclusions to  
 24 which no response is required. To the extent that a response is deemed required, Defendant  
 25 denies the allegations of Paragraph 179 of the First Amended Complaint.

26      180. Paragraph 180 of the First Amended Complaint contains legal conclusions to  
 27 which no response is required. To the extent that a response is deemed required, Defendant  
 28 denies the allegations of Paragraph 180 of the First Amended Complaint.

1       181. Paragraph 181 of the First Amended Complaint contains legal conclusions to  
 2 which no response is required. To the extent that a response is deemed required, Defendant  
 3 denies the allegations of Paragraph 181 of the First Amended Complaint.

4                  Alleged Contributory Infringement by MGI Americas

5       182. Paragraph 182 of the First Amended Complaint contains legal conclusions to  
 6 which no response is required. To the extent that a response is deemed required, Defendant  
 7 denies the allegations of Paragraph 182 of the First Amended Complaint.

8       183. Paragraph 183 of the First Amended Complaint contains legal conclusions to  
 9 which no response is required. To the extent that a response is deemed required, Defendant  
 10 denies the allegations of Paragraph 183 of the First Amended Complaint.

11                  Alleged Willful Infringement by MGI Americas

12      184. Paragraph 184 of the First Amended Complaint contains legal conclusions to  
 13 which no response is required. To the extent that a response is deemed required, Defendant  
 14 denies the allegations of Paragraph 184 of the First Amended Complaint.

15      185. Paragraph 185 of the First Amended Complaint contains legal conclusions to  
 16 which no response is required. To the extent that a response is deemed required, Defendant  
 17 denies the allegations of Paragraph 185 of the First Amended Complaint.

18      186. Paragraph 186 of the First Amended Complaint contains legal conclusions to  
 19 which no response is required. To the extent that a response is deemed required, Defendant  
 20 denies the allegations of Paragraph 186 of the First Amended Complaint.

21                  CGI's Alleged Infringement of the '200 Patent

22      187. Paragraph 187 of the First Amended Complaint contains legal conclusions to  
 23 which no response is required. To the extent that a response is deemed required, Defendant  
 24 denies the allegations of Paragraph 187 of the First Amended Complaint.

25                  Alleged Direct Infringement by CGI

26      188. Paragraph 188 of the First Amended Complaint contains legal conclusions to  
 27 which no response is required. To the extent that a response is deemed required, Defendant  
 28 admits that CGI has used certain BGISEQ and MGISEQ sequencers, in the past, at its San Jose,

1 California facility. Defendant denies any remaining allegations of Paragraph 188 of the First  
2 Amended Complaint.

3 Alleged Induced Infringement by CGI

4 189. Paragraph 189 of the First Amended Complaint contains legal conclusions to  
5 which no response is required. To the extent that a response is deemed required, Defendant  
6 denies the allegations of Paragraph 189 of the First Amended Complaint.

7 190. Paragraph 190 of the First Amended Complaint contains legal conclusions to  
8 which no response is required. To the extent that a response is deemed required, Defendant  
9 denies the allegations of Paragraph 190 of the First Amended Complaint.

10 191. Paragraph 191 of the First Amended Complaint contains legal conclusions to  
11 which no response is required. To the extent that a response is deemed required, Defendant  
12 denies the allegations of Paragraph 191 of the First Amended Complaint.

13 192. Paragraph 192 of the First Amended Complaint contains legal conclusions to  
14 which no response is required. To the extent that a response is deemed required, Defendant  
15 denies the allegations of Paragraph 192 of the First Amended Complaint.

16 193. Paragraph 193 of the First Amended Complaint contains legal conclusions to  
17 which no response is required. To the extent that a response is deemed required, Defendant  
18 denies the allegations of Paragraph 193 of the First Amended Complaint.

19 194. Paragraph 194 of the First Amended Complaint contains legal conclusions to  
20 which no response is required. To the extent that a response is deemed required, Defendant  
21 denies the allegations of Paragraph 194 of the First Amended Complaint.

22 195. Paragraph 195 of the First Amended Complaint contains legal conclusions to  
23 which no response is required. To the extent that a response is deemed required, Defendant  
24 denies the allegations of Paragraph 195 of the First Amended Complaint.

25 196. Paragraph 196 of the First Amended Complaint contains legal conclusions to  
26 which no response is required. To the extent that a response is deemed required, Defendant  
27 denies the allegations of Paragraph 196 of the First Amended Complaint.  
28

Alleged Contributory Infringement by CGI

197. Paragraph 197 of the First Amended Complaint contains legal conclusions to  
 which no response is required. To the extent that a response is deemed required, Defendant  
 denies the allegations of Paragraph 197 of the First Amended Complaint.

198. Paragraph 198 of the First Amended Complaint contains legal conclusions to  
 which no response is required. To the extent that a response is deemed required, Defendant  
 denies the allegations of Paragraph 198 of the First Amended Complaint.

Alleged Willful Infringement by CGI

199. Paragraph 199 of the First Amended Complaint contains legal conclusions to  
 which no response is required. To the extent that a response is deemed required, Defendant  
 denies the allegations of Paragraph 199 of the First Amended Complaint.

200. Paragraph 200 of the First Amended Complaint contains legal conclusions to  
 which no response is required. To the extent that a response is deemed required, Defendant  
 denies the allegations of Paragraph 200 of the First Amended Complaint.

201. Paragraph 201 of the First Amended Complaint contains legal conclusions to  
 which no response is required. To the extent that a response is deemed required, Defendant  
 denies the allegations of Paragraph 201 of the First Amended Complaint.

**RESPONSE TO PRAYER FOR RELIEF**

202. Defendant denies that Plaintiffs are entitled to any of the requested relief and  
 denies any and all allegations contained within the Prayer for Relief of the First Amended  
 Complaint.

**RESPONSE TO DEMAND FOR JURY TRIAL**

203. Plaintiffs' request for a jury trial does not require a response by Defendant.  
 Defendant also requests a jury trial of all issues triable to a jury in this action.

**AFFIRMATIVE DEFENSES**

204. Defendant repeats and realleges its answers to Paragraphs 1-203 of the First  
 Amended Complaint as if fully set forth herein.

205. Defendant denies that Illumina is entitled to any relief against Defendant.

206. Without assuming any burden of proof that it would not otherwise bear, Defendant asserts the following separate and additional defenses, all of which are pled in the alternative, and none of which constitute an admission that Defendant is in any way liable to Plaintiffs, that Plaintiffs have been or will be injured or damaged in any way, or that Plaintiffs are entitled to any relief whatsoever. As a defense to the First Amended Complaint and each and every allegation contained therein (unless specifically stated otherwise), Defendant alleges each of the following:

## **FIRST DEFENSE – NONINFRINGEMENT**

207. Defendant has not infringed, and is not infringing, directly, contributorily, or by  
inducement, any valid claim of Plaintiffs' asserted patents, either literally or under the doctrine of  
equivalents. Defendant is not liable in any respect for any alleged infringement of the Plaintiffs'  
asserted patents.

## **SECOND DEFENSE – INVALIDITY**

208. Each claim of Plaintiffs' asserted patents is invalid for failing to comply with one or more of the requirements for patentability under, including but not limited to, 35 U.S.C. §§ 101, 103, 112, and the judicial doctrine of obviousness-type double patenting. By way of example only, claim 1 of each of Plaintiffs' asserted patents is invalid as obvious over Tsien or Ju, in combination with either or both Zavgorodny 1991 and Zavgorodny 2000.<sup>3</sup> Also by way of example, claim 1 of each of Plaintiffs' asserted patents is also invalid for failing to sufficiently describe an azido protecting group such that one of ordinary skill would have known that the inventors were in possession of the claimed invention as of the filing date. As a further example, claim 1 of each of Plaintiffs' asserted patents is also invalid for being overly broad in scope and not adequately supported by enabling disclosure.

<sup>3</sup> Roger Y. Tsien et al., WO 91/06678 A1 (published May 16, 1991) ("Tsien"); Jingyue Ju et al., U.S. Patent 6,664,079 B2 (Dec. 16, 2003) ("Ju"); Sergey Zavgorodny et al., *1-Alkylthioalkylation of Nucleoside Hydroxyl Functions and Its Synthetic Applications*, TETRAHEDRON LETTERS 32:7593-96 (1991) ("Zavgorodny"); S.G. Zavgorodny et al., *S,X-Acetals in Nucleoside Chemistry, III, Synthesis of 2'- and 3'-O-Azidomethyl Derivatives of Ribonucleosides*, NUCLEOSIDES, NUCLEOTIDES & NUCLEIC ACIDS 19:1977-91 (2000) ("Zavgorodny 2000").

1                   **THIRD DEFENSE – ESTOPPEL, LACHES, WAIVER, ACQUIESCENCE &**  
 2                   **UNREASONABLE DELAY**

3         209. Illumina's claims are barred, in whole or in part, by the doctrines of estoppel,  
 4 laches, waiver, acquiescence and/or unreasonable delay. Illumina unreasonably delayed in  
 5 bringing suit until well after each of these effects occurred, despite the substantial harm they  
 6 allegedly produced. Assuming, *arguendo*, that any actionable harm occurred, this delay, in part,  
 7 prevented Defendant from curing any injury with Illumina, causing material prejudice and injury  
 8 to Defendant. Illumina has known that BGI Genomics and its affiliates have offered sequencing  
 9 services in foreign countries and that CGI has had a research facility in the San Francisco Bay  
 10 Area at least as of 2010, when CGI filed a motion to transfer a suit brought by Illumina to this  
 11 District. *Illumina Inc. et al v. Complete Genomics Inc.*, Case No. 3:10-cv-05542-EDL, D.N. 12.

12                   **FOURTH DEFENSE – STATUTE OF LIMITATIONS**

13         210. Illumina's purported claims for patent infringement are barred, in whole or in part,  
 14 to the extent that they allege acts of infringement barred by the statute of limitations. 35 U.S.C. §  
 15 286 states that "no recovery shall be had for any infringement committed more than six years  
 16 prior to the filing of the complaint or counterclaim for infringement in the action." See 35 U.S.C.  
 17 § 286. Therefore, Illumina is not entitled to recover damages from any period before six years  
 18 prior to the filing of the complaint in this matter.

19                   **FIFTH DEFENSE – ADEQUATE REMEDY AT LAW**

20         211. Illumina has an adequate remedy at law and the alleged injury to Illumina is not  
 21 immediate or irreparable. Any injury, to the extent any occurred, could be cured with damages  
 22 alone. Accordingly, there is no factual or legal basis for a grant of equitable relief.

23                   **RESERVATION OF ALL AFFIRMATIVE DEFENSES**

24         212. Defendant reserves the right to offer any other and additional defense that is now  
 25 or may become available or appear during, or as a result of, discovery proceedings in this action.

1 Dated: August 17, 2020

2 By: /s/ David Bilsker

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